

## General Information

1991

**Video: 4 Heads Rotary  
Audio: Fixed Head 1CH  
Covers Models:  
Akai VS-F420**

## Matrix

Item	See Model
Mechanical Parts View	Akai VS-422/425 89/90 Book.
Mechanical Adjustments	Akai VS-F10/F11 91/92 Book.
Replacement Pinch Wheel	Akai VS-F260
Back Tension Adjustments	Akai VS-F310
VIF Unit	Akai VS-F260
R/C's	Akai VS-F260

## Head Motors and Miscellaneous

Part No.	Description
HR-405340J	Head Combo HVMZA1121A
HE-390013J	Head HVMFME0020A
BV-V1123A410B	Lower Drum BLK X450EGN
BM-401296J	Motor E20EL89
BM-400682J1	Motor DFX-67B3VWB1 (Capstan Motor)
BM-387503J	Motor Part
BV-V1123A420B	Upper Drum BLK X450EGN

## Recommended Safety Parts

Item	Part No.	Description
<b>For EK/EOH</b>		
D1-12	ED-511907	D Silicon 1N4002 100/1.0A
D16	ED-404029J	D Zener H UTZJ10B T26
FR1-4	ER-400728J	R Fuse V TO5 RF25SCVTP1/4WR12K
FR5	ER-400605J	R Fuse V TO5 ERD2FCV 1/4W 15ROG
TR1	ET-381175J	TR 2SD1856
TR2	ET-366365	TR 2SB1185 E,F
TR3-6	ET-380685J	TR 2SD1761 E,F,G
<b>For (EOG-V)</b>		
D1-4	ED-511907	D Silicon 1N4002 100/1.0A
D6, D8, D11	ED-386226J	D Schottky RB100AT-32T26 40/1
D17, D18	ED-511907	D Silicon 1N4002 100/1.0A
FL1	EO-395035J	Coil LF PLH11C-1811R2
FL2	EO-339907	Coil LF FKOB160MH16 1000.0U
FR1	ER-400728J	R Fuse V TO5 RF25SCVTP1/4WR12K
FR2	ER-400688J	R Fuse V TO5 RF25SCVTP1/4WR10K
FR3	ER-400605J	R Fuse V TO5 ERD2FCV1/4W15ROG
FR4	ER-400689J	R Fuse V TO5 RF25SCVTP1/4WR68K
FR5	ER-405441J	R Fuse V TO5 RF25SCVTP1/4WR27K
FR6	ER-400689J	R Fuse V TO5 RF25SCVTP1/4WR68K
TR1-5	ET-366365	TR 2SB1185 E,F
TR6	ET-389808J	TR 2SB1425 E,U
TR9	ET-366365	TR 2SB1425 E,U
TR12	ET-380685J	TR 2SD1761 E,F,G
TR13	ET-366365	TR 2SB1185 E,F
<b>For (EOG-V)</b>		
IC1	EI-381575J	IC BA6121
TR2	ET-380685J	TR 2SD1761 E,F,G
TR4	ET-404195J	TR 2SC4486 S,T,TO5
TR7	ET-380685J	TR 2SD1761 E,F,G
	BT-403872J	Trans Pow V1130 EK (EK)
	BT-403883J	Trans Pow V1130 EOG-V (EOG-V)
	BT-403873J	Trans Pow V1130 EO (EOH)

## Service Adjustments

## Replacement of the Idler Part 2 and Review Brake Port

- 1: Remove the CASSETTE LOAD BLK & LOADING ARM BLK. (Refer to REMOVAL OF THE EJECTOR BLK.) Release the stopper of the IDLER PART (2) as shown in Fig. 1, then remove it.
- 2: Take off the review brake part spring, then release the stopper of the REVIEW BRAKE PART and remove it.
- 3: Reassemble these parts in the reverse order of 1 to 3.

## Replacement of the Gear Mid Part

- 1: Remove the REVIEW BRAKE PART and IDLER (2) PART with referring to the steps 1-4, above.

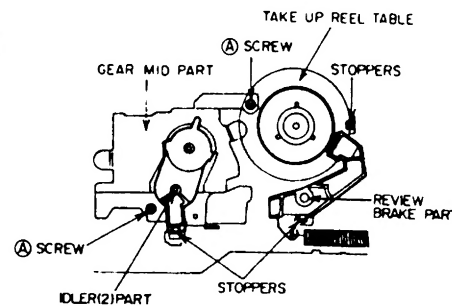


Fig 1.

- 2: Release the stopper of the TAKE UP REEL TABLE as shown in Fig 2, then remove it.
- 3: Remove the two A screws then replace the GEAR MID PART as shown in Fig. 3.
- 4: Reassemble in the reverse order.

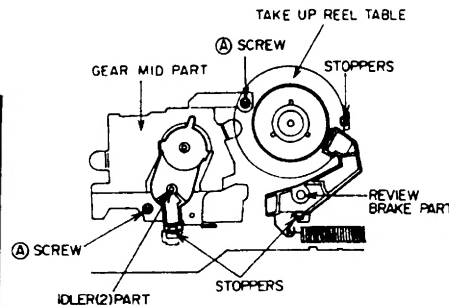
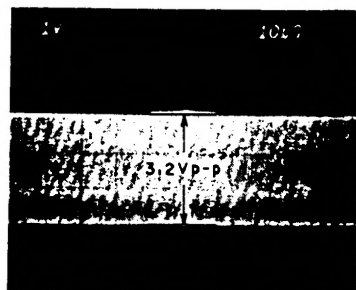
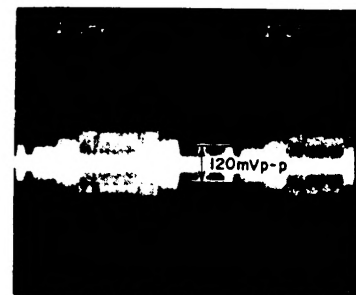


Fig 2.

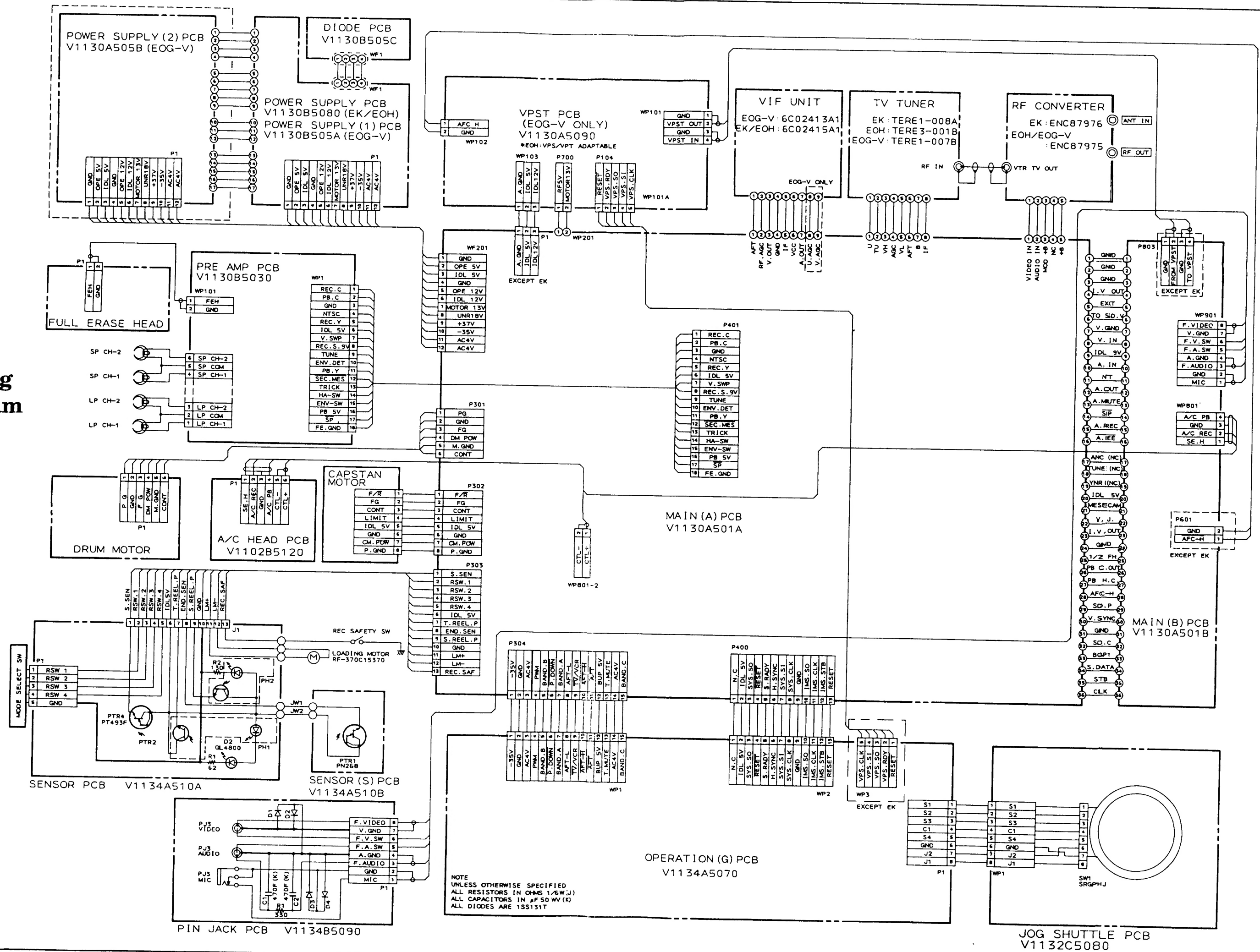
## Video REC Current

- 1: "REC" PAL colour bar signal.
- 2: P2 (REC CURR), JW188 (C.SYNC) & VR1 (REC-CHROMA), VR2 (REC-Y)
- 3: Connect an oscilloscope's CH-1 to P2 (REC.CURR) and CH-2 to JW188 (C.SYNC) for triggering. Turn the VR2 (REC-Y) fully counterclockwise. \*Adjust VR1 (REC-CHROMA) so that the chroma REC current becomes 120 mVp-p at the burst signal area. \*Disconnect the input signal, then adjust VR2 (REC-Y) so that Y REC current becomes 3.2 Vp-p.



## Mechanical Parts List

Description	Part No.	Description	Part No.	Description	Part No.
6SET20X030SCM PKR FP	ZS-374458	Holder D-LED	MZ-387430J	Slider Brake (3) Part	ML-404567J
6SET30X080SCM PKR CP	ZG-373900	Holder FE Head Part B	MZ-402760J	Slider Front Loading	ML-387428J
		Holder FPC	SZ-387388J	Slider Pinch Part	ML-387431J1
Arm Coupling	ML-387311J2	Holder Lever Tension	SZ-387263JS	Slider Trigger (2)	ML-404944J
Arm Damper	ML-391745J2	Holder Photo Sensor (2)	MZ-404542J	SLIT W17X032X025PSL	ZW-374445
Arm Lid Opener	ML-387350J1	Holder S Sensor	MZ-387445J	Slit W21X040X050PSL	ZW-387492J
Arm Loading BLK 425EA	BL-V1102A140A	Holder Thrust Worm (2)	MR-404544J	Socket 174074-5 SP (P1)	EJ-381837J
Arm Review Part	ML-387277J3			Socket Housing	
Arm Shutter	ML-387349J2	Idler (2) Part	MI-404552J	5062-30-10-13 (PS1)	EJ-387497J
		Leader S BLK 425EA	BV-V1102A070A	SP Plate Earth	ZG-392294J
Base Drum	MA-387474J2	Leader T BLK 425EA	BV-V1102A080A	SP Plate Holder	ZG-387348J1
Belt Capstan (3)	MB-407117J	Lever Damper (S)	ML-387345J	SP Pull Capstan Brake	ZG-387502J
BID26X08STL CMT	ZS-563444	Lever Damper (T)	ML-387346J	SP Pull Main Brake	ZG-387320J
BID30X03STL CMT	ZS-425981	Lever Lock Release	ML-387344J	SP Pull Review Brake	ZG-387323J
BID30X06STL CMT	ZS-379405	Lever Trigger	ML-387402J1	SP Pull Slider	ZG-387468J
BID30X08STL CMT	ZS-321298	Lower Drum BLK X450EGN	BV-V1123A410B	SP Pull Tension (2)	ZG-395470J
				SP Pull Toggle	ZG-387413J1
Capstan Brake Part	BL-387458J2	Main Brake (S) Part	ML-387316J	SP Push A/C	ZG-387438J1
Cassette Load BLK 425EA	BV-V1102A150A	Main Brake (T) Part	ML-387318J	SP Torsion Arm Damper	ZG-395567J
Cord FFCP1.25L=120 13P		Mecha Deck BLK F410EK	BB-V1130A020C	SP Torsion Coupling	ZG-387403J
(WP1)	EW-389313J	Motor DFX-67B3VWB1		SP Torsion Damper (S)	ZG-387421J
Cushion Cover	SZ-391866J1	(Capstan Motor)	BM-400682J1	SP Torsion Damper (T)	ZG-388290J1
		Motor E20EL89		SP Torsion Joint (2)	ZG-392831J
D LED GL451 Infrared (D1)	ED-390011J	(Drum Motor)	BM-401296J	SP Torsion Load (S)	ZG-387417J
Detector SG-105LF2		Motor Part (Loading Motor)	BM-387503J	SP Torsion Load (T)	ZG-387418J
(PH1) (PH2)	ET-403420J	Nut Review	ZW-401776J	SP Torsion Release	ZG-387420J
Disk (3) Part	MT-404547			SP Torsion Review	ZG-387282J
Disk Clutch (2) Part	MZ-404577J	PAN20X02STL BZN PS1	ZS-404844J	SP Trigger	ZG-387443J
DT BID30X06STL		PAN26X12STL CMT	ZS-467796	ST BID30X06STL CMT	ZS-358936
CMT C080	ZS-389853J	PAN30XD6STL CMT	ZS-379350	ST BID30X06STL CMT	ZS-358936
Earth Brush Part AG	VT-401282J	PC (#) Sensor (2) KFX	EA-404543J	ST BID30X12STL CMT	ZS-336714
		Pinch Roller (2) Part	MP-404852J	ST BID30X12STL CMT	ZS-336714
Gear Cam Slider (3)	MZ-404538J	Plate Upper	MZ-387351J1	SW Leaf MTS1011MPC1	ES-373099
Gear Eject	MZ-387335J	PT BID26X06STL CMT	ZS-365149	SW Mode Select	
Gear Front Loading	MZ-387333J	PT BID26X10STL CMT	ZS-389950J	MMS00070ZLBO (SW1)	BS-387465J
Gear MID PART	MZ-404995J	Pulley Trigger (2)	MR-391968J		
Gear Toggle (S) BLK 425EA	MZ-V1102A090A	PW26X060X050PSL	ZW-389923J	Tension Arm BLK F600EA	BL-V1123A050A
Gear Toggle (T) BLK 425EA	MZ-V1102A100A	PW31X110X050PSL	ZW-389814J	Tension Band Part	ML-390768J2
Gear Worm (2)	MZ-401686J			Tension Brake Part	ML-395471J1
Gear Worm Wheel	MZ-387332J	Retaining Ring Grip		TR Photo PN268 (TR1)	ET-361490
Guide Front (2)	SE-395554J	380STL ACP	ZW-332843	TR Photo PT493F (TR4)	ET-390009J
Guide Roller D8 PART	VT-387394J1	Review Brake (3) Part	ML-407119J		
		Roller Impedance	MR-387286J1	Upper Drum BLK X450EGN	BV-V1123A420B
Head Combo HVMZA1121A	HR-405340J				
Head E HVMFME0020A	HE-390013J				

Wiring  
Diagram

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**VS-F410EK/EOH  
VS-F420EOG-V**

**NOTE:**  
UNLESS OTHERWISE SPECIFIED,  
ALL RESISTORS IN OHMS (Ω), KΩ (K), MΩ (M)  
ALL CAPACITORS IN μF (μ), nF (N), pF (P)

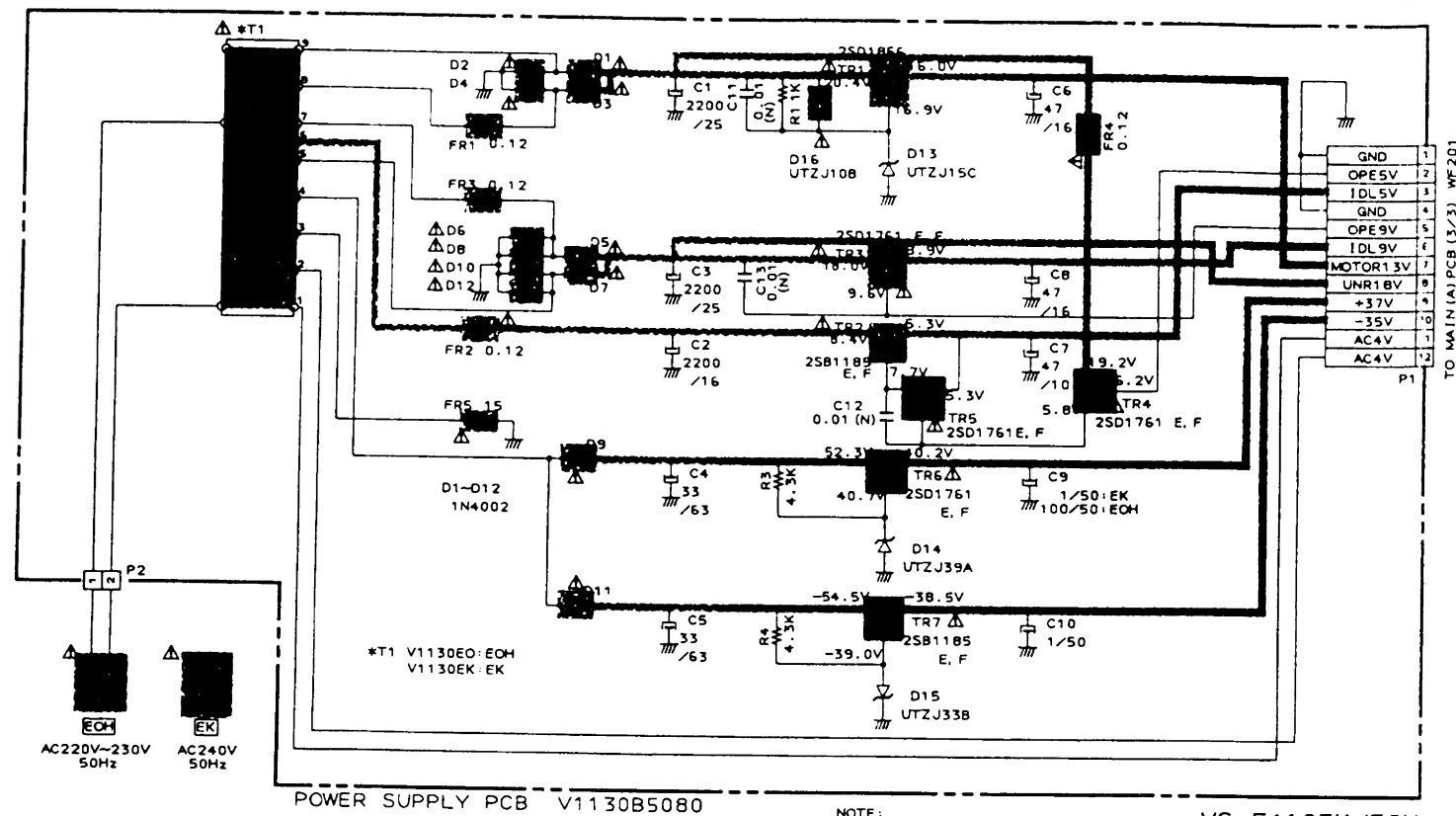
**(INDICATED VOLTAGES WERE MEASURED DURING PB MODE.)**

**SIGNAL LINE LEGEND:**  
— POWER SUPPLY LINE  
— AUDIO REC SIGNAL LINE  
- - - AUDIO PB SIGNAL LINE  
--- PB CHROMA SIGNAL LINE  
--- PB Y SIGNAL LINE  
--- VIDEO IN (REC, E-E) SIGNAL LINE

F200/F300 400EA	EXCEPT
R823	27K
C823	0.0033
C824	0.0032
C825	0.0082
FL801	V1102
VR802	473

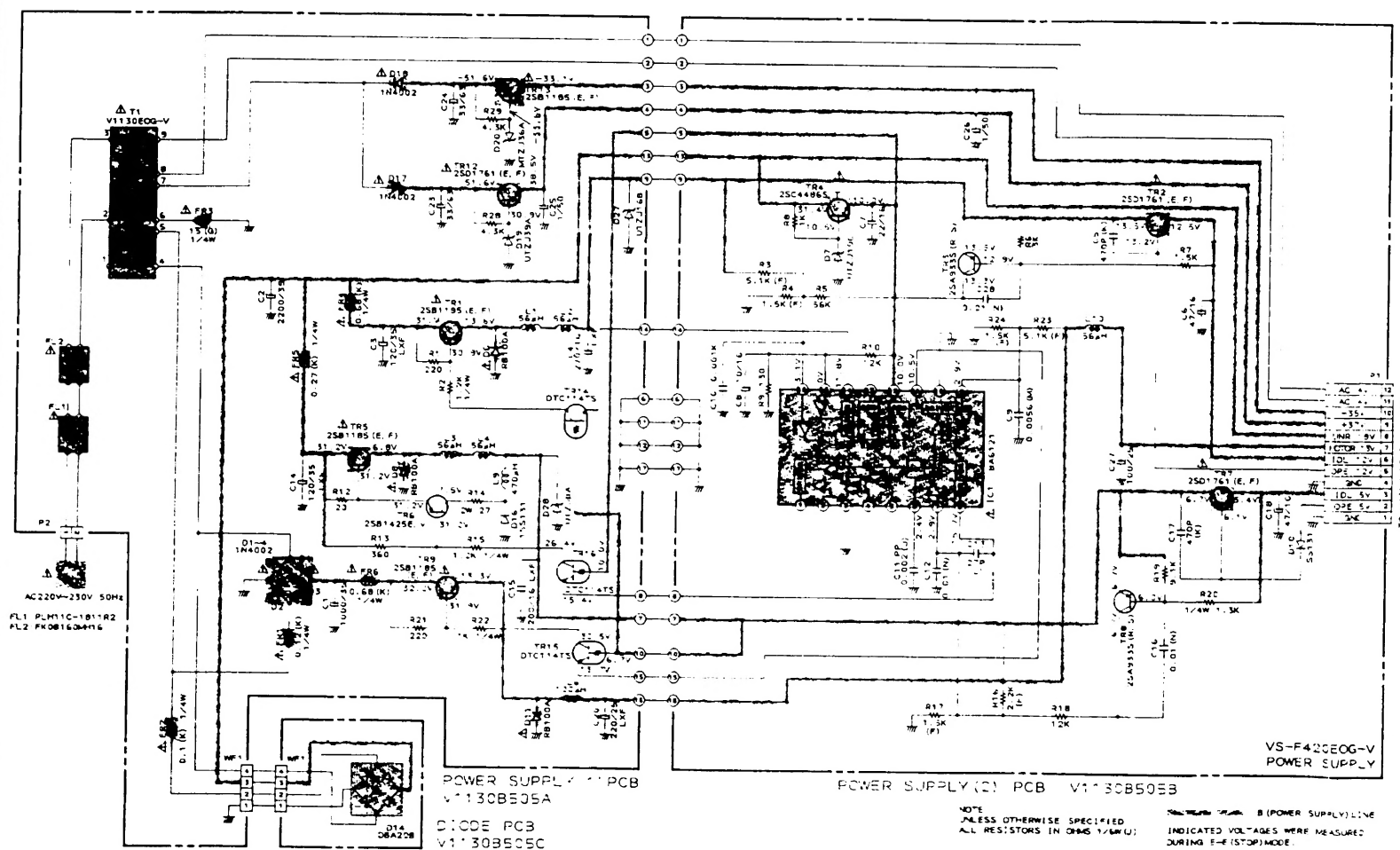
**COMPONENT VALUES FOR EXCEPT EOG-EOG-V:**

- C822: 22/10
- C823: 0.0015
- C824: 0.0033
- C825: 0.0033
- FL801: V1102
- VR802: 473
- C826: 0.0033
- C827: 0.0033
- C828: 0.0033
- C829: 0.0033
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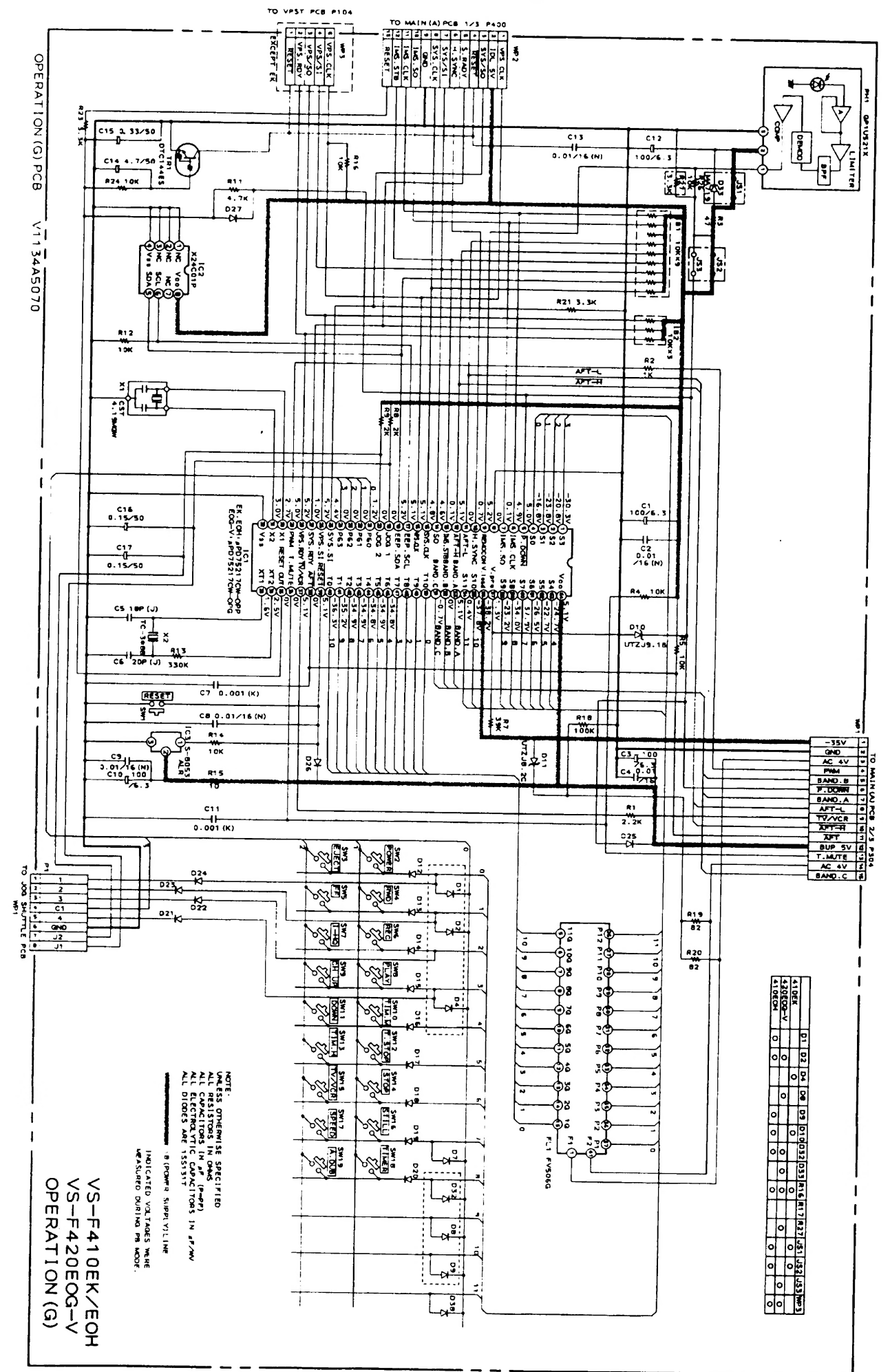
Power Supply Diagram VS-F410

Power Supply Diagram VS-F420



NOTE:  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS (1/4W (K))  
ALL CAPACITORS IN μF (50 WV (M))  
ALL FUSE RESISTORS IN OHMS (1/4W (K))

Operation (G) Diagram

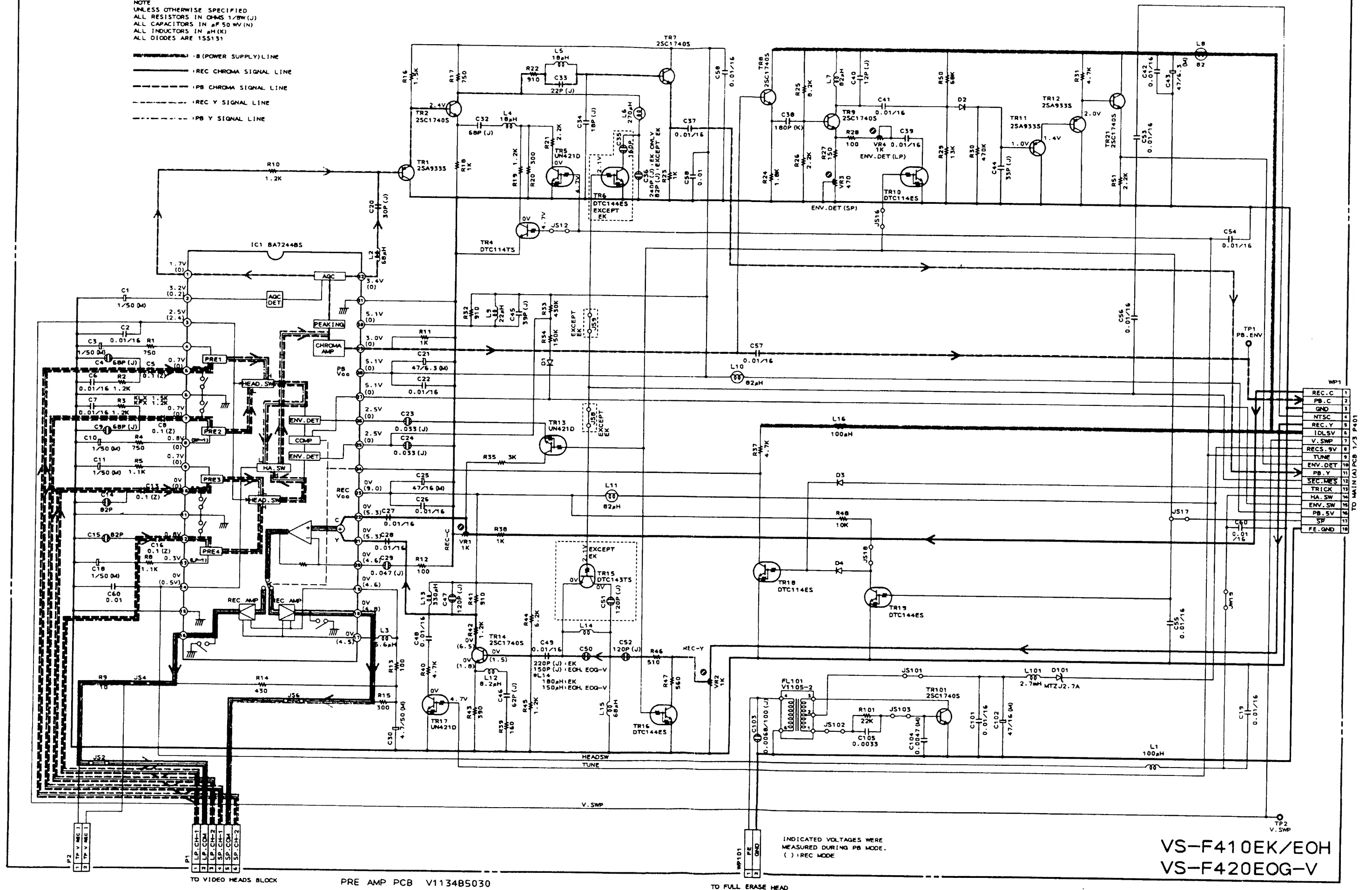




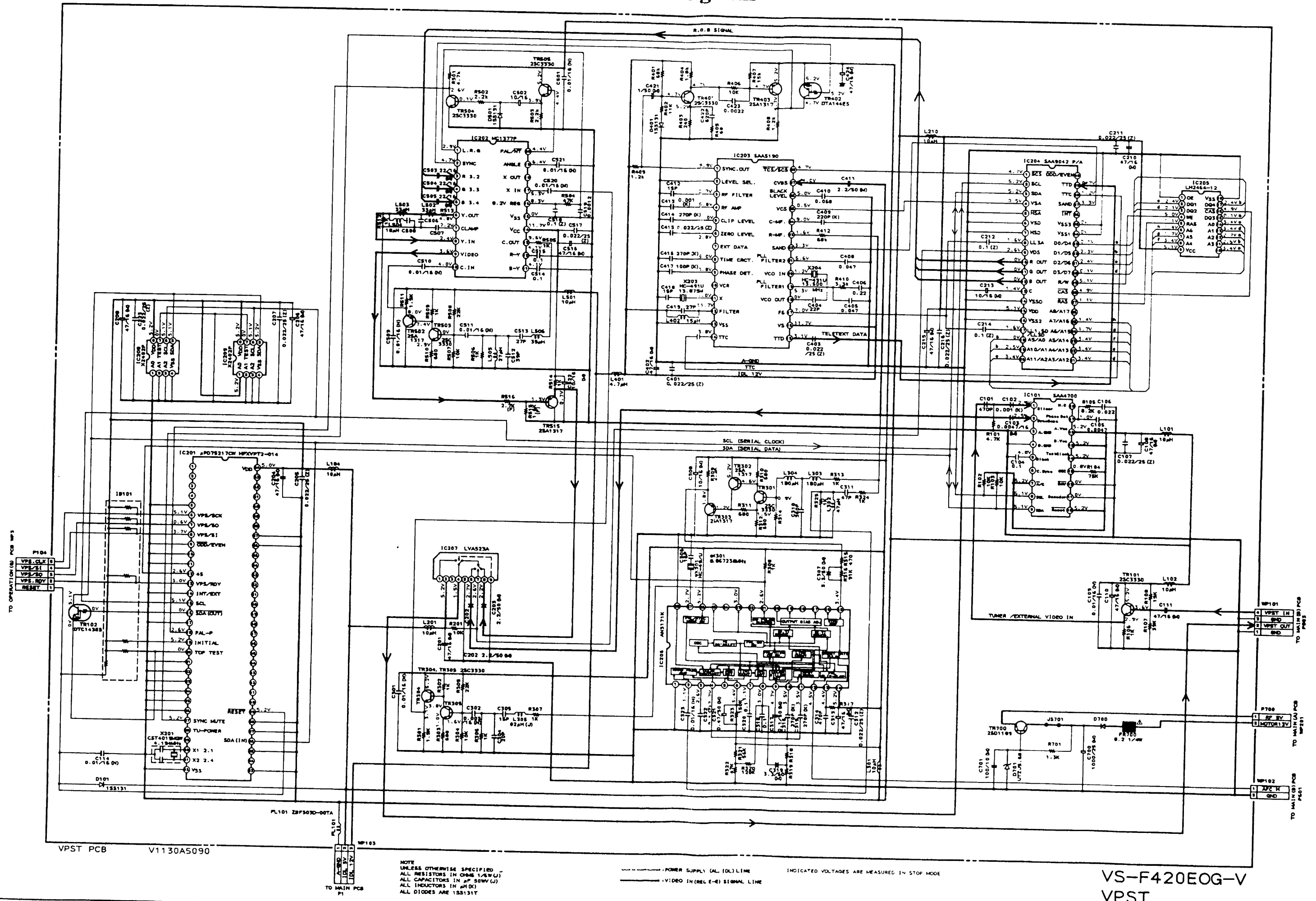
## Pre Amp Diagram

NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS 1/5W(J)  
ALL CAPACITORS IN  $\mu$ F 50 WV(N)  
ALL INDUCTORS IN  $\mu$ H(K)  
ALL DIODES ARE 1SS131

--- (POWER SUPPLY) LINE  
--- REC CHROMA SIGNAL LINE  
--- PB CHROMA SIGNAL LINE  
--- REC Y SIGNAL LINE  
--- PB Y SIGNAL LINE



## VPST Diagram





## Main Diagram 3/3

